REMARKS

Claims 1-14 were originally presented for examination, all of which are currently amended. New claims 15-18 are added by way of the present response. Of the currently pending claims 1-18, claims 1, 9 and 15 are in independent form.

Favorable reconsideration of the present application as currently constituted is respectfully requested.

Regarding the Claim Objections

Claims 3, 4, 5, 6, 10, 11, 12, 13 and 14 are objected to in the pending Office Action. Applicant has amended these claims appropriately to address the various informalities identified in the Office Action. Accordingly, it is believed that these claim objections have been overcome or rendered moot by the present response.

Regarding the Claim Rejections - 35 U.S.C. §103(a)

Claims 1-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,484,200 to Angal et al. (hereinafter the *Angal* reference) in view of U.S. Patent No. 6,456,590 to Ren et al. (hereinafter the *Ren* reference). The Examiner has commented as follows in connection with these claim rejections:

Claims 1 and 7, Angal teaches a method for managing a plurality of network elements (Abstract lines 1-13, column 1 lines 38-46) comprising receiving a plurality of quality of service alarms from a plurality of alarms (column 1 lines 53-65). Angal does not teach the determination of the network element generating the greatest number of alarms nor instructing the network element to stop sending the alarms. Ren teaches determination of the network element generating the greatest data rate (column 4 lines 32-42, column 4 lines 48-56) referenced by association of a virtual input queue to an input port which is connected to a unique device and the exceeding of a memory value for the virtual input queue. Ren further teaches instructing the network element generating the greatest number data rate to stop sending the data (column 4 lines 50-67, column 5 lines 1-2) referenced by the pausing of an upstream device which exceeded the memory value of the virtual input queue to stop data transfers. The data being the equivalent of the applicant's alarms since alarms are a form of data. Further, Ren teaches reactivating a paused device if a virtual input queue containing data drops below a lower threshold value (FIG 6b step 392, step 394). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upper/lower threshold flow control method of Ren to the network management system of Angal for the purpose of reducing congestion of excessive messages from a particular network device.

Applicant respectfully traverses the foregoing §103(a) claim rejections and offers the following arguments in support. The present invention, as defined by the base claim 1 that has been amended in order to more clearly and particularly claim the subject matter to which Applicant is entitled, is directed to a method for managing a plurality of network elements. Upon receiving a plurality of alarms from each of the network

elements, wherein the alarms belong to various types, a determination is made as to which of the plurality of network elements is generating the greatest number of alarms. Thereafter, the network element that is generating the greatest number of alarms is instructed to stop transmitting the alarms.

The *Angal* reference is directed to a method and system for allowing a computer network operations manager to subscribe for and receive notifications concerning events from one or more objects. See Abstract. In particular, an event notification distribution system (EDS) is disclosed where a discriminator mechanism (DM) 13 monitors the communications that pass across a network of a plurality of nodes 17-i (i=1, 2, 3...). Col. 4, lines 21-29. The DM 13 is operable to filter the communications in terms of one or more specified event characteristics such as event type, event location, time and/or date of event occurrence, and/or type of component or device involved in the event. Col. 4, line 64 to col. 5, line 2. Whereas the *Angal* reference teaches that event signals may include alarm signals, e.g., communications alarm signals, equipment alarm signals, quality of service (QoS) signals, security alarm signals, and the like, see, e.g., col. 1, lines 53-65, there is not even a scintilla of suggestion as to determining which of the plurality of network nodes is generating the greatest number of alarms, or as to instructing the node that is generating the greatest number of

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alarms to stop transmitting the alarms, as currently claimed by Applicant.

Although the outstanding Office Action correctly concedes these deficiencies of the *Angal* reference as applied against the claimed invention, the reliance on the *Ren* reference in this regard is of no avail. The subject matter of the *Ren* reference is concerned with providing static and dynamic flow control using virtual input queueing for shared memory Ethernet switches. Applicant respectfully submits that it is a mischaracterization of the cited language at col. 4, lines 32-42 and col. 4, lines 48-56 of the *Ren* reference to conclude that the cited language teaches "determination of the network element generating the greatest data rate." Rather, the cited language merely teaches that traffic at an input port of an Ethernet switch is monitored by assigning a virtual input queue to it and incrementing the virtual input queue when the arrival of a frame is detected. Although the *Ren* reference discloses that an upstream device is paused if the incremented value of the corresponding virtual input queue exceeds an allocated memory size, Applicant respectfully contends that such disclosure merely contemplates pausing of data frame transmission due to a buffer capacity constraint at the receiving entity (i.e., the virtual input queue), and is not at all suggestive of <u>which of the network elements is determined to generate the greatest number of alarms</u>

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<u>regardless of buffer capacity constraints</u>, as the claimed invention provides.

Furthermore, Applicant respectfully contends that there is no suggestion or motivation in either of the applied references to combine the teachings therein so as to achieve the claimed method of managing a plurality of network elements that involves suspension of transmission of alarms from a network element determined to generate the greatest number of alarms. As pointed out previously, the *Angal* reference is mainly concerned with providing a mechanism that permits a network manager to subscribe for and receive notifications relative to network events. Buffer capacity constraints which initiate the pausing of upstream devices' data frame transmission in the shared memory Ethernet switches as disclosed in the *Ren* reference are not relevant or amenable to the objects of the *Angal* reference. Thus, it is maintained that the applied combination of the references does not support a reasonable expectation of success in terms of achieving an operable result that is at least suggestive of the claimed invention. See MPEP §2143.

Based on the foregoing, Applicant respectfully submits that claimed limitations of the base claim 1 are not taught or even remotely suggested by the combination of the *Angal* and *Ren* references. Accordingly, it is believed that the base claim 1 as currently constituted is allowable over the applied

combination of the references. Claims 2-8 depend from and

further limit the base claim 1, and are therefore also deemed to

be in condition for allowance for the reasons set forth above.

Additionally, claims 9-12 stand rejected in the outstanding

Office Action under 35 U.S.C. §103(a) as being unpatentable over

the *Angal* reference in view of U.S. Patent No. 6,018,515 to

Sorber (hereinafter the *Sorber* reference), with the following

comments:

> Claim 9, Angal teaches an element management system
> (column 1 lines 38-46) referenced by TMN comprising a
> processor (FIG. 6) referenced by PROCESSOR 210, a
> store for storing computer instructions that define
> operational logic of the element management system
> (FIG. 6) referenced by MAIN MEMORY 212. Angal further
> teaches the element management system listens to
> events inclusive of QoS alarms (column 1 lines 46-65).
> Angal does not teach the issuance of a signal to stop
> sending QoS signals. Sorber teaches the transmission
> of messages based on different priorities (column 2
> lines 21-25) wherein different priority levels equate
> to quality of service. Higher service levels will be
> associated with higher priority signals. Further,
> Sorber teaches the issuance of a signal to stop
> sending messages (column 2 lines 41-48) referenced by
> the request that one or more message sources stop
> sending messages for transmission. It would have been
> *prima facie* obvious to one of ordinary skill in the
> art at the time the invention was made to modify the
> network management platform of Angal to issue a stop
> signal for different priority levels for the purpose
> of reducing congestion levels in the network. One
> skilled in the art would have been motivated to
> generate the claimed invention with a reasonable
> expectation of success.

Applicant respectfully submits that these claim rejections

have been overcome or otherwise rendered moot by the present

amendment. As currently constituted, the base claim 9 is directed to an element management system and recites the limitation of "the computer instructions, upon execution by the processor, for prompting the element management system to issue a signal to a network element to cause it to stop sending alarm signals based on a predetermined precedence of suspension of transmission." Neither the *Angal* reference nor the *Sorber* reference, taken alone or together, teaches or suggests the base claim 9 including this limitation. The *Angal* reference, discussed above, does not teach or suggest the issuance of a signal to a network element to cause it to stop sending alarm signals, as admitted in the pending Office Action. The *Sorber* reference relates to message handling and prioritizing transmission of messages in a data communications system. Col. 2, lines 21-25. Communication messages are managed using a plurality of buffers, with different buffers corresponding to different message priorities, wherein each message is stored in one of the buffers corresponding to its priority. Messages are then transmitted starting from the highest priority buffer, continuing with the next higher priority buffer, and so forth. Col. 2, lines 26-40. Also, *Sorber* teaches that when an accumulated number of messages in a buffer exceeds its established congestion level, a congestion message is generated

requesting that one or more message sources temporarily stop sending messages for transmission. Col. 2, lines 41-48.

Applicant respectfully submits that although the *Sorber* reference discloses prioritization of messages, it suffers from essentially the same infirmities as the *Ren* reference described above. Whereas a "temporary stop" request is generated when a message buffer is congested (due to a capacity constraint), this request does not teach or suggest how a message source needs to prioritize its suspension or termination of the transmission of messages, i.e., the order of precedence of suspension, which is the subject matter of the base claim 9 as currently constituted. Thus, the combination of the *Angal* and *Sorber* references fails to teach or suggest all the claim limitations.

Further, it is believed that the base claim 9 as currently constituted includes language that comports with the Examiner's comments with respect to the allowable subject matter identified in the pending Office Action. It is therefore believed that the base claim 9 and the dependent claims 10-12 depending therefrom are allowable over the applied combination of the *Angal* and *Sorber* references.

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Regarding the New Claims 15-18

Applicant has added new claims 15-18 covering the subject matter to which Applicant believes it is entitled. No new matter is introduced. Support for the newly added claims may be found in the original specification at, for example, page 18, line 10 through page 19, line 24, *inter alia*. The new base claim 15 cites the limitation of "instructing a network element by the element management system to suspend transmission of the alarm signals based on a predetermined order of precedence, if the alarm flow from the network element exceeds a flow rate associated therewith." Applicant respectfully submits that the new base claim 15 and the dependent claims 16-18 depending therefrom are allowable over the art of record for the same reasons set forth above.

Regarding the Allowable Subject Matter

Applicant gratefully appreciates the indication in the outstanding Office Action that claims 13 and 14 "would be allowable if rewritten to overcome the objections above set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims." In view of the present amendment, it is believed that claims 13 and 14 are in condition for allowance.

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Fee Statement

Applicant believes no fee is due with the submission of this Response. If, however, a fee is due, please debit our deposit account, **Account No. 03-1130**.

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SUMMARY AND CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the outstanding objections and rejections and allow claims 1-18 presented for reconsideration herein. Accordingly, a favorable action in the form of an early notice of allowance is respectfully requested.

Respectfully submitted,

Dated: _June 24, 2004_

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